

10.6100

S/138/62/000/011/006/008  
A051/A126

AUTHOR: Kharitonov, A.T.

TITLE: Maximum compression deformation of rubber-metal elements

PERIODICAL: Kauchuk i rezina, <sup>21</sup>no. 11, 1962, 24 - 27

TEXT: The author discusses the derivation of quantitative relations of maximum deformation for three types of elements (Fig. 1): a) a cylinder with free ends; b) a cylinder with fixed ends; c) an element with "recesses". He derives equations for the calculation of various parameters. It is concluded that maximum deformations of compression in elements with "recesses" are higher than those of right-angled ones. This is the advantage of the elements described. There are 5 figures. ✓B

ASSOCIATION: Bryanskiy institut transportnogo mashinostroyeniya (Bryansk Institute of Transport Machine-Building)

~~Classified~~

KHARITONOV, A.T.; KRASNOVA, N.A.; VINITSKIY, L.Ye.

Effect of the shape of the side surface of rubber-and-metal  
elements on the force characteristics of the compression.

Kauch. i rez. 22 no.10:38-42 0 '63.

(MIRA 16:11)

1. Bryanskiy institut transportnogo mashinostroyeniya i Vsesoyuznyy  
nauchno-issledovatel'skiy institut zheleznodorozhnogo transporta.

KHARITONOV, A.V.

Inspection carried out by voluntary inspectors. Izv. tekhn.  
no.9:56 S '64. (MIRA 18:3)

SOV/46-5-2-9/34

AUTHORS: Merkulov, L.G. and Kharitonov, A.V.

TITLE: Theory and Calculation of Composite Concentrators  
(Teoriya i raschet sostavnykh kontsentratorov)

PERIODICAL: Akusticheskiy zhurnal, 1959, Vol 5, Nr 2, pp 183-190  
(USSR)

ABSTRACT: In an earlier paper (Ref.1) Merkulov discussed simple ultrasonic concentrators in the form of conical, exponential and catenoidal horns. Composite concentrators, formed by joining the rods of constant and variable cross-sections (Fig.1), are also of interest. Some work has already been published on composite concentrators (Refs.2,3), but the lack of a technique of calculation of properties of such concentrators has impeded their practical application. The authors remedy this by deriving general expressions for the condition of resonance, the amplification factor and the input impedance of composite concentrators. Some cases of practical importance, shown in Figs.2-9, are dealt with in detail, and the best forms of concentrators are determined. The input impedance characteristics of various concentrators near the resonance frequency are shown in Fig.11. To

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verify the theoretical results the authors tested several concentrators made from steel St.40. The testing technique was essentially the same as that described in Ref.1, but certain improvements to it made it possible to measure the resonance frequency within 0.1% and the amplification factor to 5-10%. A table on p 189 shows the results obtained on testing a conical horn with a cylindrical rod, and an exponential horn, also with a cylindrical rod. The empirical values of the amplification factor (col.9) agree with the theoretical values (col.7) within the experimental error. The empirical resonance frequencies (col.8) are somewhat lower than the theoretical values (col.6). A "stepped" concentrator (shown in Fig.8) was also tested experimentally and the results are shown in Fig.12. The experimental values of the amplification factor agree well with the theoretical values, but the agreement between the empirical and theoretical resonance curves is somewhat poorer (probably because of bending vibrations). The authors studied also three-piece concentrators; good agreement between the calculated and experimental values of the

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Theory and Calculation of Composite Concentrators

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amplification factor was obtained, while the empirical resonance frequency was found to be somewhat lower than the theoretical value and it depended strongly on the form of the intermediate piece which joined the two outer parts of the concentrator (e.g. Fig.9). There are 12 figures, 1 table and 4 references, of which 2 are Soviet, 1 English and 1 translation of English into Russian.

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut im. V.I. Ul'yanova (Lenina) (Leningrad Electro-Technical Institute imeni V.I. Ul'yanov (Lenin))

SUBMITTED: April 18, 1958

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6,8000 (and 1063, 1155)

S/046/61/007/001/012/015  
B104/B204

AUTHOR: Kharitonov, A. V.

TITLE: A device for measuring the internal friction of solids in the frequency range of 20 to 400 kc

PERIODICAL: Akusticheskiy zhurnal, v. 7, no. 1, 1961, 104-106

TEXT: The device described was developed at the Laboratory of Electroacoustics of the Institute mentioned under Association. It is destined for measuring the internal friction and the propagation rates of elastic waves in solids. Within the frequency range studied, many materials, especially single crystals, have very low attenuation decrements and the difficulty of investigating such substances is due to the scattering of the vibration energy of the test specimen in the structural parts of the apparatus, and to its radiation into the surrounding medium. By suitable selection of the means of fastening the test specimen, by suitable excitation and recording methods, and by placing the test specimen in a container with rarefied air, the residual attenuation decrement of the apparatus could be reduced to  $10^{-6}$ . The block diagram of the entire apparatus is shown in Fig. 1. Test specimen 1 is a full cylinder accurately fastened by a wiretriangle. The excitation of Card 1/3

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A device for ...

S/046/61/007/001/012/015  
B104/B204

an odd harmonic longitudinal vibration is effected with the help of a plate condenser. One of the plates forms the end of the test specimens, whilst the other plate is the electrode 2, which is connected to a sound generator 3. In the case of non-metallic test specimens, a silver plate is fastened to one of the ends. By means of a micrometer screw, the air gap between the electrodes may be varied between 0.05 and 0.1 mm. The frequency of the generator was measured by means of a heterodyne frequency meter. In the investigation of non-ferromagnetic test specimens, the recording of vibrations was carried out electro-dynamically. In ferromagnetic materials, a ring made from bariumtitanate was used, which served as receiver of the permanent radial oscillations. The sensitivity of this method was somewhat lower than that of the first. The electric signal was amplified by means of a super-heterodyne 7, and the amplified signal was conveyed to a voltmeter 8 and an oscilloscope 9. The entire system was placed into a vacuum chamber

( $10^{-2}$  to  $10^{-3}$  mm Hg). The measurements were made by two methods. In the case of internal frictions with  $Q^{-1} > 10^{-4}$ , the 0.7-width of the resonance curve was determined. With  $Q^{-1} < 10^{-4}$ , the attenuation of the free vibrations of the test specimen was measured. When switching off the generator

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S/C46/61/007/001/012/015  
B104/B204

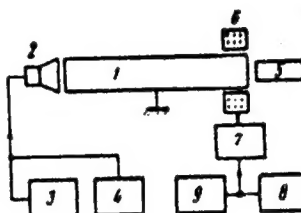
A device for ...

voltage, the decrease of the amplitudes could be observed on the screen. By means of this apparatus, the internal friction of aluminum, magnesium, and copper was investigated. A certain frequency dependence of internal friction, and the least internal friction were measured with polycrystalline aluminum of high purity (99.99%):  $Q^{-1} = 10^{-6}$ . There are 3 figures and 4 Soviet-bloc references.

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut im. V. I. Ul'yanova (Lenina) (Leningrad Institute of Electrical Engineering imeni V. I. Ul'yanov (Lenin))

SUBMITTED: February 23, 1960

Fig. 1



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26390  
S/046/61/C07/C03/004/004  
B104/B201

AUTHOR: Kharitonov, A. V.

TITLE: Ultrasonic torsion concentrators

PERIODICAL: Akusticheskiy zhurnal, v. 7, no. 3, 1961, 387 - 389

TEXT: It is noted by way of an introduction that interest for concentrators using torsional vibrations has grown in recent years in connection with the development of ultrasonic welding techniques. As is shown in the present paper, results of an analysis on concentrators operating with longitudinal vibrations can be used for their calculation. The torsion concentrator is assumed to be a solid rod or a hollow rod with a variable cross section lengthwise (see attached figure), its maximum diameter being considerably smaller than the wavelength. In this case, the cross sections of the vibrating rod remain perpendicular to the longitudinal axis of the rod. Under these premises, the problem can be solved in one-dimensional approximation:

$\rho I dz \frac{\partial^2 \theta}{\partial t^2} = M \frac{\partial \theta}{\partial z} - \frac{\partial M}{\partial z} dz$ ;  $\theta = \theta(z, t)$  is the torsion;  $I = I(z)$  is the polar moment of inertia,  $M = M(z, t)$  is the torque, and  $\rho$  is the density of

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Ultraasonic torsion ...

26393  
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B104/B201

the rod material. Herefrom, one obtains the differential equation

$$\frac{d^2\theta}{dz^2} + \frac{dI}{Idz} \frac{d\theta}{dz} + k_t^2 \theta = 0$$
, where  $k_t = \omega/c_t$ ; and  $c_t$  is the velocity of transversal waves in the rod. A comparison with the differential equation

$$\frac{d^2u}{dz^2} + \frac{dS}{Sdz} \frac{du}{dz} + k_1^2 u = 0$$
 for the longitudinal displacement in a rod

of variable thickness shows the agreement of all calculative expressions obtained from the two differential equations. Finally, the author examines the form of a rod in which the torsional waves (or longitudinal waves) propagate at a velocity that is independent of

$$\frac{-1}{2I} \frac{d^2I}{dz^2} - \frac{1}{4I^2} \left( \frac{dI}{dz} \right)^2 = \beta^2 = \text{const}$$
 holds for a rod of this kind. One then

obtains for the rod shape:

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Ultrasonic torsion ...

$$I(z) = \begin{cases} (Cz+D)^2, & \beta = 0 \\ (Ce^{jz} + De^{-jz})^2, & \beta^2 > 0 \\ (C\cos bz + D\sin bz)^2, & \beta^2 < 0, \beta = jb. \end{cases}$$

The first case is characterized by the absence of a dispersion; the second case displays a negative dispersion, and the third case a positive dispersion of the wave velocities. There are 1 figure and 6 Soviet references.

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut im. V. I. Ul'yanova (Lenina) (Leningrad Institute of Electrical Engineering imeni V. I. Ul'yanov (Lenin))  
SUBMITTED: March 27, 1961

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S/046/63/009/001/014/026  
B104/B186

AUTHOR: Kharitonov, A. V.

TITLE: The dependence of internal friction in metals on the amplitudes of vibration

PERIODICAL: Akusticheskiy zhurnal, v. 9, no. 1, 1963, 80 - 87

TEXT: A. Granato and K. Lücke (J. Appl. Phys., 1956, 27, 6, 583 - 593; 7, 789 - 805) developed a dislocation theory of internal friction based on the dislocation model of J. S. Koehler (Imperfections in nearly perfect crystals. N. Y., 1952, p. 197). Here this theory is completed by a calculation of the dependence of logarithmic decrement of damping on the amplitudes of vibration. The following assumptions are made: (1) in the polycrystalline sample a set of slip systems is oriented chaotically; (2) dislocations are distributed uniformly between all slip systems. The logarithmic decrement of damping ( $\Delta(\sigma) = \Delta(Eu)$ , where  $u$  is the deformation amplitude) is represented in the form

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The dependence of internal friction...

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$$\Delta(u) = \sum_{m=0}^{\infty} C_m \Delta^{(m)}(u) u^m, \quad (12)$$

$$C_m = \frac{(m+3) D_m + m D_{m-1}}{2m};$$

$$D_m = \int_0^{\pi/2} \sin^3 \varphi (\sin \varphi - 1)^m d\varphi.$$

$B_0$	1	$C_0$	+1
$B_1$	1,18	$C_1$	+0,17810
$B_2$	1,33	$C_2$	-0,01143
$B_3$	1,47	$C_3$	+0,00115
$B_4$	1,60	$C_4$	-0,00012

In a comparison between this result and experimental data it is shown that the theory of Granato and Lücke does not give a real dependence of the decrement of damping on the amplitudes. Granato and Lücke assumed a random distribution of the point defects along the dislocations. Here it is shown that elastic interactions between the point defects force them to spread along the dislocations so that lattice distortions produced by dislocations are reduced to a minimum. There are 4 figures.

ASSOCIATION: Leningradskiy Elektrotekhnicheskiy institut im. V. I.  
Ul'yanova (Lenina) (Leningrad Electrotechnical Institute  
Card 2/3 imeni V. I. Ul'yarov (Lenin))

KHARITONOV, A.V.

Training metrologists for the factories of Central Chernozem Economic  
Region. Izv.tekh. no.6:58 Ja '64.  
(MIRA 17:12)

KHARITONOV, A.V.

Observations of minor planets at the Institute of Astrophysics of  
the Academy of Sciences of the Kazakh S.S.R. Astron. tsir. no. 172:4-  
5 Ag '56. (Planets, Minor) (MLRA 10:1)



MOROZ, V.I.; KHARITONOV, A.V.

Photoelectric photometry of areas on Mars' surface. Astron. tsirk.  
no.174:4-6 N '56. (MLRA 10:3)

1. Astrofizicheskiy institut AN KazSSR.  
(Mars (Planet))

KHARITONOV, A.V.

KHARITONOV, A.V.

Spectrophotometric temperature of two peculiar stars near Orion  
nebula [with summary in English]. Izv.Astrofiz.inst. AN Kazakh.SSR  
5 no.7:17-20 '57. (MLRA 10:7)

(Stars--Temperature)

KHARITONOV, A.V.

Photoelectric observations of AE Aurigae. Per.zvezdy 12  
no.2:148-149 N '57. (MIRA 13:4)

1. Astrofizicheskiy institut AN SSSR, Alma-Ata.  
(Stars, Variable)

MOROZ, V.I.; KHARITONOV, A.V.

Photoelectric photometry of regions on Mars' surface [with summary  
in English]. Astron. zhur. 34 no.6:903-920 N-D '57. (MIRA 11:2)

1. Astrofizicheskiy institut AN KazSSR.  
(Mars (Planet))

BOYKO, P.N.; KHARITONOV, A.V.

Polarization observations of Arend-Roland's comet. Astron. tsir.  
no.181:6-8 Je '57. (MIRA 13:3)

1.Astrofizicheskiy institut AN KazSSR.  
(Comets--1956)

AUTHOR: Roshkovskiy, I.A., Matyagin, V.S. and 33-35-3-17/27  
 Kharitonov, A.V.

TITLE: The Experiences of the Photographic Observations of the Artificial Satellites With the Aid of the Meniscus Telescope of Maksutov (Opyt fotograficheskikh nablyudeniĭ iskusstvennykh sputnikov zemli pri pomoshchi meniskovogo teleskopa Maksutova).

PERIODICAL: The observatory of the Astrophysical Institute of the Academy of Sciences of the Kazakh SSR in Alma Ata tested and developed different methods for the photographic observation of artificial satellites. In particular an improvement of the observations with a meniscus telescope of Maksutov (D = 50 cm, F = 120 cm) was aimed at. The observations of the second sputnik proved that the application of this telescope to the purposes mentioned above is also possible under unfavorable conditions. For the synchronization of the moments of motion of the sputnik with the chronometer an oscillating plane-parallel glass plate (12 × 12 cm<sup>2</sup>, thickness 8 mm) was used which was put before the correcting lense of the telescope. (A similar apparatus was already applied by R. Trümpler [Ref 3]). The exactness of the measurements amounted to ± 2" for the determination of the coordinates and ± 0,001 sec for the time.

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PERIODICAL: \* Astron zhur. 35, no. 3, p. 479-85 '58

The Experiences of the Photographic Observations of the Artificial Satellites With the Aid of the Meniscus Telescope of  
Maksutov 33-35-3-17/27

The calculations were carried out by L.N. Tulenkova according to the method of Deych [Ref 5]. From January 22 to February 11 6 photographs of the second sputnik were taken. The authors think that the method would be essentially improved, if the correcting lence, not the plate, were made to oscillate.

There are 3 figures, 1 table, and 5 references, 4 of which are Soviet, and 1 German.

ASSOCIATION: Astrofizicheskiy institut Akademii nauk Kaz SSR (Astrophysical Institute of the Academy of Sciences of the Kaz SSR)

SUBMITTED: March 21, 1958

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23( ),20(

7/25-39-6-12/89

AUTHOR: Matyagin, V.S. and Kharonov, A.V., Scientific  
Workers

TITLE: How We Watch the Sputniks

PERIODICAL: Nauka i zhizn', 1959, Nr 8, pp 23- 25 (USSR)

ABSTRACT: The authors report on their observations of the sputniks at the observatory of the Astrophysical Institute of the AS Kazakhskaya SSR, located in the foothills of the Zailiyskiy Ala-Tau, 1,450 m above sea level, 12 km from Alma-ata. The scientific work of the institute is carried out under the direction of Academician V.G. Fesenkov. The rocket carrier of the first sputnik was successfully observed with theodolites. For one cycle of the rocket flight, it was possible to make up to 6 theodolite aimings. These individual theodolite observations are only possible when the sputnik is visible to the naked eye. At other times, the so-called barrier method is applied, which consists of the simultaneous using of up to 20 - 30

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### How to Watch the Sputniks

telescopes. However, these two methods are not very precise. A considerably higher precision is reached by photographic methods. By this method, one of the first photographs of the rocket-carrier of the first sputnik was obtained. The reequipped aerial photographic camera "MAFA" with a fast shutter was used to observe the second sputnik and the rocket-carrier of the third sputnik. With the assistance of the chief of the astrophysical department of the observatory, D.I. Rozhkovskiy, the authors of this article developed an improved simpler method. They used a meniscus astrograph of the Makutov system with an inlet opening of 50 cm and a focal length of 120 cm in their observations. Inside the telescope an additional plane-parallel glass plate had been mounted which serves as shutter without cutting off the light. The light rays of the sky and the sputnik caught by the telescope pass through this plate

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How We Watch the Sputniks

before they fall on the photographic plate. As soon as the glass plate inclines at a small angle, all images of the stars, and consequently of the sputnik's track are transferred to one side of the photograph. The inclinations are performed by two electromagnets. In the course of each half second, when the plate is immovable in one of the outer positions, the image of the moving sputnik draws an uninterrupted track on the picture. At moments when the plate transfers from the one outer position to the other, the track of the sputnik is interrupted, and the images of the stars are double-exposed. During the sputnik's flight through the visual field of the telescope, 10 to 25 transfers are usually completed. For this reason the track is obtained as an interrupted line. They are clearly seen in the negative and the moments of time corresponding to them can easily be fixed by an electric circuit switched to an oscillograph. This device is a modification of a mirror galvanometer. To

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SCV/25-59-8-12/48

How We Watch the Sputniks

obtain a more precise registration of the elements (within 0.01 sec) quicker transfers are necessary, which will be obtained by an additional vibration of the steel swinging arm. The good optic properties of the telescope permitted the scientists to measure the coordinates of the sputniks with a precision of up to 0.0005 degrees. By means of the method described the authors obtained about 10 photographs of Sputnik II, 6 of Sputnik III and more than 30 of the rocket-carrier of Sputnik III. There are 4 photographs

ASSOCIATION: Astrofizicheskiy institut Akademii nauk Kazakhskoy SSR (Astrophysical Institute of the AS Kazakhskaya-SSR)

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3.9000

78019

SOV/33-37-1-19/31

AUTHORS: Dzhasybekova, E. K., Kazachevskiy, V. M., Kharitonov, A. V.

TITLE: A Determination of the Albedo of the Earth.

PERIODICAL: Astronomicheskiy zhurnal, Vol 37, Nr 1, pp 131-134  
(USSR)

ABSTRACT: This work was undertaken upon the recommendation of Academician V. G. Fesenkov. The earth-shine of the moon was observed between September 29, 1957 and August 21, 1958. The problem consists in comparing the brightness of the portion of the moon's surface illuminated by the sun with the earth-shine. Taking into account the "phase" of the earth for an observer on the moon, one can compute the average spherical albedo of the earth. The theory and the method of observation were described in 1955 by the second of the three authors. The instrument consists essentially of two objectives, which bring into the field of an eyepiece both the sunlit and the earth-shine portions of the moon; a cat's-eye diaphragm in front of the first

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A Determination of the Albedo  
of the Earth

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lens equalizes visually the brightness of the two images. The mean wave length of the visual moon light is found to be equal to 5,640 A, and the polarization of the moon's light about 10%. The ratio of the light intensity reduced by the diaphragm during the observations to that of the full opening is 0.0057. A table gives the observed values of the earth's albedo for 17 observations together with the geographical coordinates of the moon for each date. The average value of the earth's albedo is equal to  $0.391 \pm 0.014$ . Previous values found by various observers between 1914 and 1953 vary from 0.29 (A. Danjon) to 0.56 (F. Very). Whether there are any variations with the seasons or with the 11-year period of solar activity remains undecided. The authors thank Z. V. Karyagina for help in observing and computing. There is 1 figure; 3 tables; and 12 references, 8 Soviet, 2 French and 2 U.S. The U.S. references are: H. Russel, Astrophys. J., 43, (1916);

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A Determination of the Albedo  
of the Earth

78019  
30V/33-37-1-19/31

F. Very, Astrophys, Obs, Nr 1 (1917).

ASSOCIATION: Astrophysical Institute of the Academy of Sciences  
of Kazakh SSR (Astrofizicheskiy institut AN KazSSR)

SUBMITTED: June 1, 1959

Card 3/3

KHARITONOV, A.V.

Electrophotometric observation of the variable AE Aurigae.

Izv.Astrofiz.inst.AN Kazakh.SSR 9:29-31 '60.

(MIRA 13:5)

(Stars, Variable)

KHARITONOV, A.Y.

Determining the night coefficient of transparency. Izv.  
Astrofiz. inst. Akad. Nauk Kazakh SSR 9:53-55 '60. (MIRA 13:5)  
(Atmospheric transparency)



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S/026/60/000/04/036/070  
D048/D006

3.1550

AUTHORS: Kazachevskiy, V.M.; Kharitonov, A.V. (Alma-Ata)

TITLE: The Earth's Reflectivity

PERIODICAL: Priroda, 1960, N<sub>r</sub> 4, pp 95-96 (USSR)

ABSTRACT: This is an account of the reflectivity of the Earth and other planets in relation to the spherical albedo. The albedo of some parts of the surface of Mars was determined from photoelectric observations made by V.I. Moroz and A.V. Kharitonov in 1956. Academician V.G. Fesenkov, of the Astrophysical Institute of the AS KazSSR, proposed that the spherical albedo of the Earth should be redetermined in connection with IGY. Among those who took part in this work were E.K. Dzhasybekova, Z.V. Karyagina, V.M. Kazachevskiy and A.V. Kharitonov. The reflections from the positive edge of the Moon and dust light went through two different optical channels whereby the rays from the

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D048/D006

The Earth's Reflectivity

positive edge were greatly weakened by the reflection from the two unsilvered glass surfaces, the prism and the plate. The reflections then reached the ocular along with the unweakened rays from the dust light in such a way that the observer at the same time could see the crescent of the Moon and the outer side of the dust light pertaining to the Moon's outer edge. With the aid of extensible "cat's eye" diaphragm fixed in the optical channel for crescent rays, the observer was able to regulate the visible brightness of the crescent and that of the dust light. From observations carried out over a period of nearly two years (1957-58), the mean albedo value of 0.39 was obtained.

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21200

3.1240(2105,2605,1141)  
3.1250(1062,1168 ONLY)

S/503/61/011/000/001/003  
EO32/E314

AUTHOR: Kharitonov, A.V.

TITLE: A Photo-electric Stellar Spectrophotometer for  
a 50 cm Reflector

PERIODICAL: Akademiya nauk Kazakhskoy SSR. Astrofizicheskiy  
institut. Izvestiya. v. 11. Alma-Ata, 1961,  
pp. 54 - 63

TEXT: The spectrophotometer was designed for investigations  
of the continuous spectra of stars and is mounted on the 50 cm  
reflector of the Astrofizicheskiy institut AN KazSSR  
(Astrophysics Institute of the AS KazSSR). The mechanical  
design and assembly was carried out at the workshops of the  
Institute by M.S. Semenov with the assistance of F.T. Lyuts.  
First recordings were obtained in May, 1959, and since then  
various modifications have been introduced. The optical  
arrangement of the device is illustrated schematically in  
Fig. 1, in which A is the section in the plane of the  
declination circle and B is the section through the

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A Photo-electric ....

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S/503/61/011/000/001/003  
E032/E314

perpendicular plane. The main mirror of the Cassegrain reflector is 50 cm in diameter and the auxiliary one is 14 cm in diameter. The equivalent focal length is 12 m and the image of the star is formed at the point marked 3 . The exit slit is mounted in this position and the plane containing the slit makes an angle of  $67.5^{\circ}$  with the optical axis of the telescope, the slit itself lying in the plane of the declination circle. The apparatus also includes an eyepiece attachment 4 . The plane mirror 5 is introduced in order to reduce the dimensions of the monochromator in the direction of the axis of the telescope. This mirror reflects the light through  $90^{\circ}$  to the telescope axis onto a spherical collimating mirror 6 (focal length 50 cm). The parallel beam produced by this mirror is directed onto the diffraction grating 7, and, finally, the spectrum is focused by the mirror 8 onto the exit slit 9 . The mirrors 6 and 8 are used in the off-axis position, which gives rise to astigmatism but this is said to be unimportant in the study

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21200

A Photo-electric ....

S/503/61/011/000/001/003  
E032/E314

The plane parallel thin glass plate 13 reflects about 8-10% of the light incident upon it onto the photomultiplier  $\Phi\gamma_2$  and a record is made of the ratio of the signals from  $\Phi\gamma_1$  and  $\Phi\gamma_2$ . This can be used to compensate for random changes in the image of the star on the slit. All the absolute measurements are carried out with a wide entrance slit (3 - 4 mm), in which case the monochromator, in fact, becomes a slitless one so that the latter effect is not of great importance. Fluctuations associated with stellar flicker are reduced by using a large time constant (0.4 - 0.6 sec). The rate of scanning normally employed is 8-3 Å/sec. The amplifier is of the form described by Kuprevich in Ref. 14. The results obtained with this instrument are summarised as follows. Continuous spectra between 3600 and 5900 Å can be studied when antimony-caesium photocathodes are employed. In this region the spectrophotometer can be used to observe 6<sup>m</sup> stars.

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A Photo-electric ....

S/505/61/011/000/001/005  
E032/E314

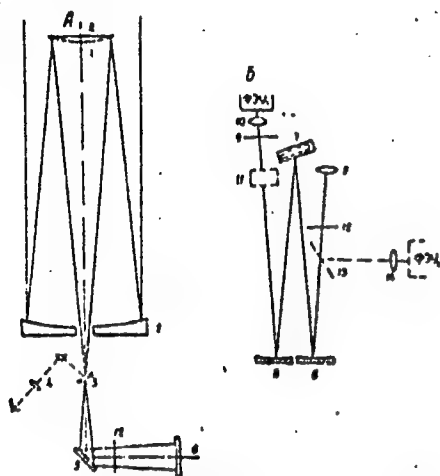
(The SPM (VEI) photomultiplier was used with the fastest stars; dark current  $7 \times 10^{11}$  A, sensitivity 0.4 A/ml at 800 V.) Using special photomultipliers with a long wave limit at 3 500 A (Rabotnova and Kononchuk - Ref. 24), the range can be extended to 6 600 A. In the red region the penetrating power of the instrument falls to  $3^m - 3.5^m$ . The instrument is suitable for the determination of equivalent widths of strong isolated lines, e.g. Balmer lines in the spectra of early stars and the H and K lines in type G stars, etc. Fig. 4 shows the spectrum of  $\alpha$ Lyr in the violet and ultraviolet region. This record was obtained in the third order using an exit slit of 0.5 mm and the IC-6 (FS-6) filter. At the present time, the spectrophotometer is being used to investigate the energy distribution in the spectrum of a number of bright stars in absolute units. There are 4 figures and 24 references: 14 Soviet and 10 non-Soviet. . . .  
The following Soviet personalities are also mentioned:  
P. P. Dobronravin, V. B. Nikonov and V. I. Moroz.

X

Card 5/6

A Photo-electric ....

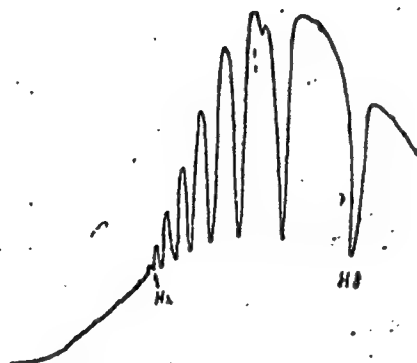
Fig. 1:



Card 6/6

21200  
S/503/61/011/000/001/003  
E032/E314

Fig. 4:



KHARITONOV, A.V.

Methods and some results of studying the energy distribution  
in stellar spectra in absolute units. Izv. Astrofiz. inst. AN  
Kazakh. SSR 12:27-36 '61. (MIRA 14:12)  
(Stars--Spectra)



09332

S/033/61/038/001/015/019  
E032/E514

9.6150

AUTHOR: Kharitonov, A.V.

TITLE: A Study of the Temperature Dependence of the  
Luminescence of a Phosphor Excited by  $\beta$ -Radiation

PERIODICAL: Astronomicheskiy zhurnal, 1961, Vol.38, No.1, pp.164-166

TEXT: The apparatus employed in the present work is illustrated schematically in Fig.1. Type EC-5 (BS-5) phosphor, incorporating  $\text{Sr}^{90}$  as the radioactive exciting agent, was employed. The phosphor 1 was located inside an aluminium double-walled container which was kept at the required temperature by passing water through the gap between the walls, or by filling it with a mixture of salt and snow. One end of the container was covered with a glass plate 2. The phosphor was "viewed" through this glass window by the photomultiplier located inside the container 5. Standard phosphors were attached to the moveable rod 6 so that they could be presented to the photomultiplier when required. The signal from the photomultiplier was amplified using an amplifier described by V. I. Moroz in Ref.3 and was recorded with the aid of Card 1/4

89332

S/033/61/038/001/015/019  
E032/E514

A Study of the Temperature Dependence of the Luminescence of a Phosphor Excited by  $\beta$ -Radiation

the ЭПД-09 (EPP-09) potentiometer. Fig.2 shows the dependence of the luminescence of the phosphor BS-5 as a function of the temperature in the range  $-8$  to  $+48^{\circ}\text{C}$ . The luminescence decreases almost linearly, the decrease being  $0.6^{\circ}$  per deg. The use of various filters showed that the blue and red regions of the spectrum are the most sensitive to temperature changes, while the green region ( $4900$ - $5800 \text{ \AA}$ ) remains practically unaffected. Thus, on heating from  $8$  to  $44^{\circ}\text{C}$  the intensity in the region  $4200$  to  $4900 \text{ \AA}$  decreases by  $37\%$ , while in the region  $4900$  to  $5800 \text{ \AA}$  the decrease was  $4\%$ . The corresponding figures for the regions  $5700$  to  $6100 \text{ \AA}$  and above  $6000 \text{ \AA}$  were  $20\%$  and  $22\%$ , respectively. Thus, the temperature changes affect not only the intensity of the luminescence emitted by this phosphor but also the energy distribution in its spectrum. The apparatus was also used to investigate the  $\alpha$ -particle excited luminescence in the  $\alpha$ -СПД (SPD) (type 3(Z)) phosphor. The reduction in luminescence in the latter case was found to be lower ( $0.17\%$  per deg.). The above phosphors

Card 2/4

89332

S/033/61/038/001/015/019  
E032/E514

A Study of the Temperature Dependence of the Luminescence of a  
Phosphor Excited by  $\beta$ -Radiation

were prepared in the laboratory of Professor V. L. Levshin at the  
FIAN im. P. N. Lebedeva (Physics Institute, AS imeni P. N. Lebedev).  
There are 2 figures and 3 Soviet references.

ASSOCIATION: Astrofizicheskiy institut Akademii nauk KazSSR  
(Astrophysical Institute, Academy of Sciences  
KazSSR)

SUBMITTED: June 14, 1960

Card 3/4

Card 4/4

KHARITONOV, A.V.

Distribution of energy in the spectra of  $\alpha$  Lyrae,  $\alpha$  Aquilae and  
 $\alpha$  Ophiuchi given in absolute units. Astron. tsir. no. 222:20-23  
My '61. (MIRA 15:4)

1. Astrofizicheskiy institut AN KazSSR.  
(Stars, Variable--Spectra)

KHARITONOV, A.V.

Energy distribution in the spectrum of Lyrae in absolute  
units. Izv.Astrofiz.inst.AN Kazakh.SSR 15:52-62 '62.

(MIRA 16:1)

(Stars, Variable--Spectra)

GLAGOLEVSKIY, Yu.V.; KHARITONOV, A.V.

Operation, analysis, and some improvements in the design of a photo-  
electric spectrophotometer. Vest. AN Kazakh.SSR 19 no.10:67-75 0 '63.  
(MIRA 17:1)

AUTHOR: Kharitonov, A.V.

TITLE: Concerning the nocturnal spectral transparency in the region of the Astrophysical Institute of the AS Kazakh SSR

SOURCE: Akademiya nauk Kazakhskoy SSR. Astrofizicheskiy institut. Trudy. v. 3. 1962. Rasseyaniye i polarizatsiya sveta v zemnoy atmosfere; materialy Soveshchaniya po rasseyaniyu i polarizatsii sveta v atmosfere. 154-157

TEXT: The results given in the present paper relate to the study of the energy distribution in continuous spectra of various stars for the purpose of setting up spectral photometric standards which are more accessible for observation. The observations were conducted by means of a spectrophotometer with photoelectric recording, mounted on a refractor. The transparency coefficient was determined by Bouguer's method. The stars

Card 1/2

... the nocturnal ...  
 $\eta$  UMa and  $\alpha$  Lyr were observed (as descending stars), and also  
the stars  $\gamma$  Ori and  $\beta$  Ari (as ascending stars). Observations  
over a period of 8 summer-autumn nights of 1961 were processed.  
The wavelength region of 6700 to 3300 Å was investigated.  
Although very fair nights were chosen for the observations,  
the optical instability of the atmosphere was considerable, i.e.,  
the transparency did not remain constant during the observations,  
but improved in the course of the night. This is a  
normal phenomenon, due to the removal of dust from the lower  
atmosphere which starts in the evening, and to the general deterioration  
of transparency in daytime. The transparency coefficients for  
the 8 nights of observation are listed in a table. A comparison  
of the obtained results with those of earlier observations shows  
that the transparency was lower in 1961 than in 1959 and 1960.  
Table.

Ari 2/2



*E. coli*

RDS/ENIT(d)/FCC(w)      AFFTC      IJP(C)

5/208/63/003/002/008/014

51

52

A. Tsch.: Zaguskin, V. L. and Kharitonov, A. V. (Moscow)

TITLE: Solution of the stability problem by iteration

PERIODICAL: Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki, v. 3,  
no. 2, 1963, 361-364

TEXT: The direct Rauss-Hurwitz method for studies of the stability of differential equations and systems of such equations is sometimes extremely sensitive to the rounding-up errors. The authors present an iteration method having a necessary and sufficiently fast (quadratic) convergence. The general method for the calculation of the roots of a polynomial was previously given by one of the authors, I. I. Zhuravskiy, in the paper "Metody dlya vychisleniya korney mnogochlenov i koeffitsientov zadachi ob ustoychivosti" [Universal methods for the evaluation of roots of polynomials and the solution of the stability problem], Report to the "II All-Union Math. Meeting, Numerical Mathematics Section, Leningrad, July 1964".

Card 1/2

Card 1/2

L 12741-63

S/205/63/003/002/002/014

Solution of the stability ...

of the initial polynomial, in particular of those close to the imaginary axis. After some discussions of the case of pure imaginary roots, the authors mention the unique case when the method fails to produce a result. This happens when  $\bar{f}_1$  is among the roots of the initial polynomial (or matrix), or when there exist such  $\bar{f}_1$  and  $\bar{f}_2$  which transform into  $\bar{f}_1$ . This happened only once during the investigation. The authors thank S. A. Avramenko and other members conducting the seminar for the evaluation of the paper and useful remarks.

SUBMITTED: April 5, 1962

Card 2/2

KHARITONOV, A.V.

Extra-galactic spectrophotometric standards; energy distribution  
in the spectra of selected stars in CGS units. Astron.zhur. 40  
no.2:339-350 Mr-Apr '63. (MIRA 16:3)

1. Institut astrofiziki AN KazSSR.  
(Stars--Spectra)

KARYAGINA, Z.V.; KHARITONOV, A.V.

Determining the stellar magnitude of the sun in three-color systems on the basis of absolute spectrophotometric observations. Astron. zhur. . 40 no.6:1123-1125 N-D '63. (MIRA 16:12)

1. Astrofizicheskiy institut AN KazSSR.

KARYAGINA, Z.V.; KHARITONOV, A.V.

Use of standards in spectrophotometric observations. Energy  
distribution in the spectrum of Persei in the region  
3200---10300 Å in absolute units. Izv. AN Kazakh. SSR. Ser. fiz.-mat.  
nauk no.1:32-42 '63. (MIRA 17:4)

KHARITONOV, A.V.

Determining the spectral absorption factor for a spherical concave mirror. Izv. AN Kazakh. SSR. Ser. fiz.-mat.nauk no.1:78-82 '63.  
(MIRA 17:4)

KHARITONOV, A.V.

Night spectral transparency in the region of the Astrophysical  
Institute of the Academy of Sciences of the Kazakh S.S.R. Trudy  
Astrofiz. inst. AN Kazakh SSR 3:183-187 '62. (MIRA 16:11)

KARYAGINA, N.V.; KHARITONOV, A.V.

Energy distribution in the spectra of 17 stars expressed in  
absolute energy units. Izv. AN Kazakh. SSR. Ser. fiz.-mat.  
nauk no.3a10-27 S-D '64. (MIRA 17412)



KHARITONOV, A.V.

Energy distribution in the spectra of four stars expressed  
in absolute energy units. Izv. AN Kazakh. SSR. Ser. fiz.-  
mat. nauk no.3:28-32 S-D '64. (MIRA 17:12)

KARYAGINA, Z.V.; KHARITONOV, A.V.

Study on the UVB photometric system. Astron.zhur. 42 no.2:377-385  
Mr-Apr '65. (MIRA 18:4)

1. Institut astrofiziki AN KazSSR.

ACC NR: AT6032811

SOURCE CODE: PO/0000/66/000/000/0021/0028

AUTHOR: Kharitonov, A. V. (Leningrad)

ORG: Leningrad Electrotechnical Institute im. V. I. Ul'yanov (Lenin), (Leningradskiy elektrotckhnicheskii Institut)

TITLE: Dislocation theory of amplitude-dependent internal friction in crystalline media

SOURCE: Conference on Acoustics of Solid Media. Warsaw, 1964. Proceedings. Warsaw, PWN, 1966, 21-28

TOPIC TAGS: polycrystal, crystal lattice dislocation, crystal vibration, single crystal, aluminum crystal, copper crystal, dislocation theory, internal friction

ABSTRACT: A new dislocation theory on the dependence of internal friction in crystalline media on amplitude has been developed on the basis of the Kochler model. The theory examines not only the longitudinal exponential distribution of dislocation segments, but also the case of an arbitrary distribution. It is shown that in such conditions only one pair of adjacent dislocations can logically be considered to participate in each separation. Since there are relatively few separated

Card 1/2

ACC NR: AT6032811

points, it is not very probable that a flow separation would occur in the range of stresses examined in this theory. A theoretical analysis of the theory includes calculation of separation probability, of mean energy lost during separation, of energy loss per unit volume of the crystal during the period of vibrations, and of the damping constant. The theory is shown to forecast the quadratic dependence of the damping constant on vibration amplitude. The deduction is confirmed by experimental study of amplitude-dependent interval friction in polycrystal aluminum, copper single crystals, and iodine carbide single crystals. Data obtained from earlier research (A. V. Kharitonov, Akusticheskiy zhurn., 9, (1963), 80-87) are presented to illustrate the agreement of the theory with experimental results. Orig. art. has: 4 figures and 7 formulas. [Based on author's abstract] [GC]

SUB CODE: 20/SUBM DATE: 14Jun65/ORIG REF: 002/OTH REF: 007/

Card 2/2

ACCESSION NR: AP3013579

S/003L/63/000/010/0067/0075

AUTHORS: Glagolevskiy, Yu. V.; Kharitonov, A. V.

TITLE: Operating experience with, investigation of, and some improvements to the photoelectric spectrophotometer

SOURCE: AN KazSSR Vestnik, no. 10, 1963, 67-75

TOPIC TAGS: stellar spectrophotometer, photoelectric spectrophotometer, photoelectric stellar spectrophotometer, spectrophotometer design, star spectrophotometer, photoelectric recording

ABSTRACT: Several improvements and changes made recently on a stellar spectrophotometer and photoelectric recorder, built by A. V. Kharitonov (Izv. Astrofizicheskogo instituta AN KazSSR, 11, 54, 1961), have been described. The diffraction lattice rotation of the scanner has been changed. A new kinematic mechanism is introduced for the lattice rotation, powered by a reversible RD-09 motor. With the forward advance of the screw rod connected to the motor shaft, the angular rotation rate of the lattice can be made to vary. By means of this mechanism changes in the dispersion, the presence of  $d\beta/dt$  and  $\cos\phi$  inhomogeneities, are shown to be completely compensated for (see Fig. 1 on the Enclosure). Also, the

Card 1/3

ACCESSION NR: AP3013579

electrometric amplifier circuit has been modified with the use of a new amplifier system called "Kaktus." The filament current for the first lamp is increased to improve the amplifier gain without loss of stability. The new circuit contains a multi-alkaline photocathode photomultiplier FEU-38. Decreasing of photometric errors connected with guiding at various wavelengths is reported. These errors involve a maximum of 7.3% at  $\lambda = 3200 \text{ \AA}$  to a minimum of 1.0% at  $\lambda = 4221 \text{ \AA}$ . The penetration capability of the instrument is set at stars of magnitude  $6^m - 6^m .2$ . The various characteristics of this spectrophotometer are then compared with those reported by J. E. Geake and W. L. Wilcock (Monthly Notices Roy. Astron. Soc. 116, 5, 561, 1956), W. Lillier (Publ. Astron. Soc. Pacif. 69, 411, 511, 1957), and P. Guérin (Ann. Astrophysique, 22, 6, 611 - 1959). Orig. art. has: 6 figures, 4 formulas, and 2 tables.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 27Nov63

ENCL: 01

SUB CODE: OP

NO REF SOV: 009

OTHER: 003

Card 2/3



FILATOV, F.I.; KOLPASHNIKOV, A.I.; Prinimali uchastiye: POTAPOV, P.I.;  
YERMILOV, A.M.; TOLMACHEV, B.Ya.; KHARITONOV, A.Ya.

Determination of residual stresses in the brake drums of airplane  
wheels. Zav.lab. 28 no.2:223-224, '62. (MIRA 15:3)  
(Airplane Brakes) (Strains and stresses)



KHARITONOV, A.Ye., inzhener.

Experience in the production of concrete pipes. *Biul.stroi.tekh.* 10  
no.10:13-15 My '53. (MLBA 6:8)  
(Pipe, Concrete)

LEONOV, F.M.; SHARITONOV, B.A.

Regulating the angle of fuel injection advance in diesel engines.  
Trudy IIF no.2/9:21-28 '65. (MIRA 18:9)

ACC NR: AM6001048

Monograph

UR/

D'yachenko, N. Kh.; Kostin, A. K.; Mel'nikov, G. V.; Petrov, V. M.; Kharitonov, B. A.

Theory of internal combustion engines<sup>1</sup> (Teoriya dvigateley vnutrennogo sgoraniya) 58  
Moscow, Izd-vo "Mashinostroyeniye," 1965. 459 p. illus., biblio. Textbook for  
students specializing in internal combustion engines at institutions of higher 64  
learning. Errata slip inserted. 16,000 copies printed.

TOPIC TAGS: internal combustion engine, carburization, engine combustion system,  
engine performance characteristic, engine exhaust system

PURPOSE AND COVERAGE: This book is published as a textbook for students in higher  
technical educational institutions and can also be used as a handbook for engine-  
design engineers and their technical staffs. It gives an analysis of the internal  
combustion engine and its applications, from agricultural equipment (stationary  
and mobile) through automotive and marine uses. A thorough description of turbo-  
superchargers and engine power rating is included. Fuel and cooling systems and  
their characteristics are also discussed. This book was prepared by the internal-  
combustion-engines faculty of the Leningrad Polytechnical Institute in, N. I.  
Kalinin. The authors appear in the following order: B. A. Kharintovich, chapters I  
and IX; G. V. Mel'nikov, chapters II and VII (Except subheading 4 and 5 in chapter  
VII); N. Kh. D'yachenko, chapters III and VI (Except subheading 4 in chapter VI);  
V. M. Petrov, chapters IV and V (Except subheading 1 and 4 in chapter V);  
A. K. Kostin, chapters VIII, X, and subheading 4 in chapter VII; B. P. Pugachev,  
subheading 1 and 4 in chapter VI; Yu. N. Isakov, subheading 5 in chapter VII.

Card 1/3

UDC: 621.43.001(075.8)

L 2 318-00

ACC NR: AM6001048

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ACC NR: AM6001048

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SUB CODE: 21/ SUBM DATE: 16Jul65/ ORIG REF: 026/

Card 3/3 90

KHARITONOV, B.D.

Tectonics of the Vol'sk Khvalynsk region of the Volga Valley.  
Izv. AN SSSR. Ser. geol. 21 no. 10:107-109 0 '56. (MLRA 10:1)

1. Upravleniye proyektirovaniya sooruzheniy i issledovaniy stroitel'-  
stva gidrotekhnicheskikh sooruzheniy Ministerstva elektrostantsiy  
SSSR, Kuybyshevskiy filial.  
(Volga Valley--Geology, Structural)

AUTHOR: KHARITONOV, B.D. PA - 3175  
 TITLE: Landslide Phenomena as Connected with Processes of River-Bed Formation. (O svyazi opolznevykh yavleniy s protsessami formirovaniya rusla rek, Russian)  
 PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol 113, Nr 3, pp 671-673 (U.S.S.R.)

ABSTRACT: With respect to conditions of the landslide areas in the central Volga district two basic types may be distinguished along the high right banks of the river Volga:  
 1.) The ur-bank, which is separated from the bed of the river by the deposits of the terraces located above the marsh, and sometimes also by the marsh itself.  
 2.) The river bed is immediately beside the bank.

With respect to landslides the following areas can in this case be distinguished:

- 1.) Such as are covered by "active" landslides.
- 2.) Such as are covered by landslides which have been stopped, and
- 3.) Such as show no landslide-like formations and are detectable only by boring.

The order of "Plës" sections on the river Volga and sandbanks is also responsible for the order in which sections with active

Card 1/2

APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000721820001

Landslide Phenomena as Connected with Processes of River-Bed Formation. PA - 3175

landslides and such where landslides have been stopped follow one another. Gradually, these "plës" and sandbanks shift farther in the direction of the flow of the river if the river bed is fairly straight. Consequently, sections marked by landslides will also tend in a downstream direction, whereas in the upper parts landslides will gradually stop. However, as soon as conditions connected with the formation of a "Plës" occur again, landslides will again set in. (2 Illustrations and 3 Slavic References).

ASSOCIATION: Not given  
 PRESENTED BY: N.M. STRAKHOV, Member of the Academy, on 25.10.1956  
 SUBMITTED: 1.6.1956  
 AVAILABLE: Library of Congress

Card 2/2

KHARITONOV, B.D.

Method of classifying reservoir banks according to their design.  
Geog.sbor. no.10:189-192 '58. (MIRA 12:1)  
(Reservoirs)



3(0)

SOV/20-123-2-39/50

AUTHOR: Kharitonov, B. D.

TITLE: The Origin of Towpaths on River Banks (O prichine formirovaniya bechevnikov na beregakh rek)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 2, pp 350-352 (USSR)

ABSTRACT: One of the characteristic elements of the banks of larger rivers is the towpath, a small strip of land, which is slightly inclined towards the river and flooded during high water. The upper part of the towpath gives way to a one to few dozen meter high steep bank; this then breaks to a flatter slope which eventually merges with the level high ground. Usually the steep bank is ascribed to the work of erosion (Ref 2). From this it would follow that the towpath itself is a site of intensive erosion; however, such an assumption contradicts actuality. From an analysis of collected facts, it is seen that the towpaths are best formed on slopes which have had a long history of development (Fig 1, A). Such slopes are mostly of bed-rock. Banks which are of unconsolidated river gravels have only rudimentary towpaths or none at all (Fig 1, B). This fact and

Card 1/3

The Origin of Towpaths on River Banks

SOV/20-123-2-39/50

others indicate that the formation of the towpath and the steep slope above is due to the action of breakers, which is significantly great along large rivers. The poor development of towpaths along the edge of flood plains and the strong development on bedrock is simply explained; towpaths can only develop fully where normal bank undercutting is less intensive than wave erosion; otherwise the towpath is destroyed by undercutting. Thus an indispensable condition for towpath formation is a retardation of erosion and such a condition is found only along banks which are of solid rock, which to be sure, though resistant to a flowing river, are not resistant to waves. The best conditions occur along cliffs or rock-like cliffs, where the towpaths reach their highest development. Where the bank is protected by river accumulations, i.e. sandbanks (Ref 6), the wave erosive force is spent on these bars and the river banks are not eroded. At places where the slope of the bar is slight, narrow wave-cut terraces develop, mostly during fall storms. There are 2 figures and 6 Soviet references.

ASSOCIATION:  
Card 2/3

Kuybyshevskiy filial Vsesoyuznogo proyektno-izyskatel'skogo i nauchno-issledovatel'skogo instituta "Gidroproyekt" im. S. Ya.

The Origin of Towpaths on River Banks

SOV/20-123-2-39/50

Zhuka (Kuybyshev Branch of the All-Union Planning and Pros-  
pecting Scientific Research Institute "Gidroproyekt" imeni  
S. Ya. Zhuk)

PRESENTED: June 18, 1958, by I. P. Gerasimov, Academician  
USSR

SUBMITTED: June 15, 1958

Card 3/3

PETROV, Ye.G., kand.sel'skokhoz.nauk; KHARITONOV, B.D., inzh.; VANEYAN,  
S.S., inzh.

The SPM-200 automotive irrigating machine. Gidr. i mel. 13  
no.2:13-24 F '61. (MIRA 14:9)  
(Irrigation)

\_\_\_\_\_  
Agricultural machinery-exhibitions

7-17. Agricultural machinery exhibition. Gorkh. 1954.

9. Monthly List of Russian Accessions, Library of Congress, May 1954, Uncl.

KHARITONOV, B.K.; SVIDERSKIY, N.I.

New agricultural machinery at the All-union Agricultural Exhibition. Sel'khoz mashina no.9:3-7 S '54. (MLRA 7:9)  
(Agricultural machinery)

KHARITONOV, B.K., inzh.

Items from technical information bulletins of the councils of  
national economy. Trakt.i sel'khoz mash. 30 no.10:46-47 0  
'60. (MIRA 13:9)

(Agricultural machinery industry)

KHARITONOV, B.K., inzh.

Items from technical information bulletins of the councils of national economy. Trakt. i sel'khoz mash. 30 no.11:46-47 N '63.

(Tractors)

(MIRA 13:12)  
(Agricultural machinery)



KHARITONOV, B.K., inzh.

Items from technical information bulletins of the councils of  
national economy. Trak. 1 sel'khoz mash. 31 no.1:48-3 of cover  
Ja '61. (MIRA 14:1)

(Machine-shop practice)

KHARITONOV, B.K., inzh.

Items from technical and economic information bulletins  
of the councils of national economy. Trakt. i sel'khoz mash.  
31 no. 3 of cover J1 '61. (MIRA 14:6)  
(Agricultural machinery industry)

KHARITONOV, B.K., inzh.

Items from technical information bulletins of the councils of national  
economy. Trakt. i sel'khoz mash. 31 no. 5:47 My '61. (MIRA 14:5)  
(Agricultural machinery industry)

KHARITONOV, B.K., inzh.

Items from technical and economical information bulletins of the  
councils of national economy. Trakt.i sel'khoz mash. 31 no.9:45  
S '61. (MIRA 14:10)

(Agriculture)

KHARITONOV, B.K., Inzh.

Items from technical and economic information bulletins of councils  
of national economy. Trakt. i sel'khoz mash. 31 no.10:47-48 0 '61.  
(MIRA 14:12)

(Agricultural machinery)

KHARITONOV, B.K., inzh.

New books. Trakt. 1 sel'khoz mash. 32 no.5:p.3 of cover My  
'62. (MIRA 15:5)

(Farm mechanization--Bibliography)  
(Agricultural machinery--Bibliography)

KHARITONOV, B.K., inzh.

From the pages of technical and economic information bulletins of  
economic councils. Trakt. i sel'khoz mash. 32 no. 647-48, 1962.

(HBA-45:6)

(Bibliography--Welding) (Bibliography--Tractors)  
(Bibliography--Milling machines)

KHARITONOV, B.K., inzh.

Problem concerning the mechanization of soil tillage in  
mountainous areas. Trakt.i sel'khoz mash. no.8:47-48 Ag '62.  
(MIRA 15:8)

(Tillage)

(Agricultural machinery)



KHARITONOV, B.K., inzh.

G.I. Volkov; obituary. Trakt.i sel'khoz mash. 32 no.9:48, 3 of cover  
S '62. (MIRA 15:12)

(Volkov, Grigori Ivanovich, 1909-1962)

KHARITONOV, B.K., inzh.

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